BC Economic Atlas
User Guide

September 2014

Ministry of Jobs, Tourism and Skills Training and Responsible for Labour

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1 INTRODUCTION

Welcome to the **BC Economic Atlas**! The BC Economic Atlas (BCEA) is a user friendly, publicly available web-based mapping application that integrates and displays spatial economic and natural resource data to support business and investment opportunity identification, business case analysis and business and investment decision-making in BC.

The **BC Economic Atlas** improves the way we:

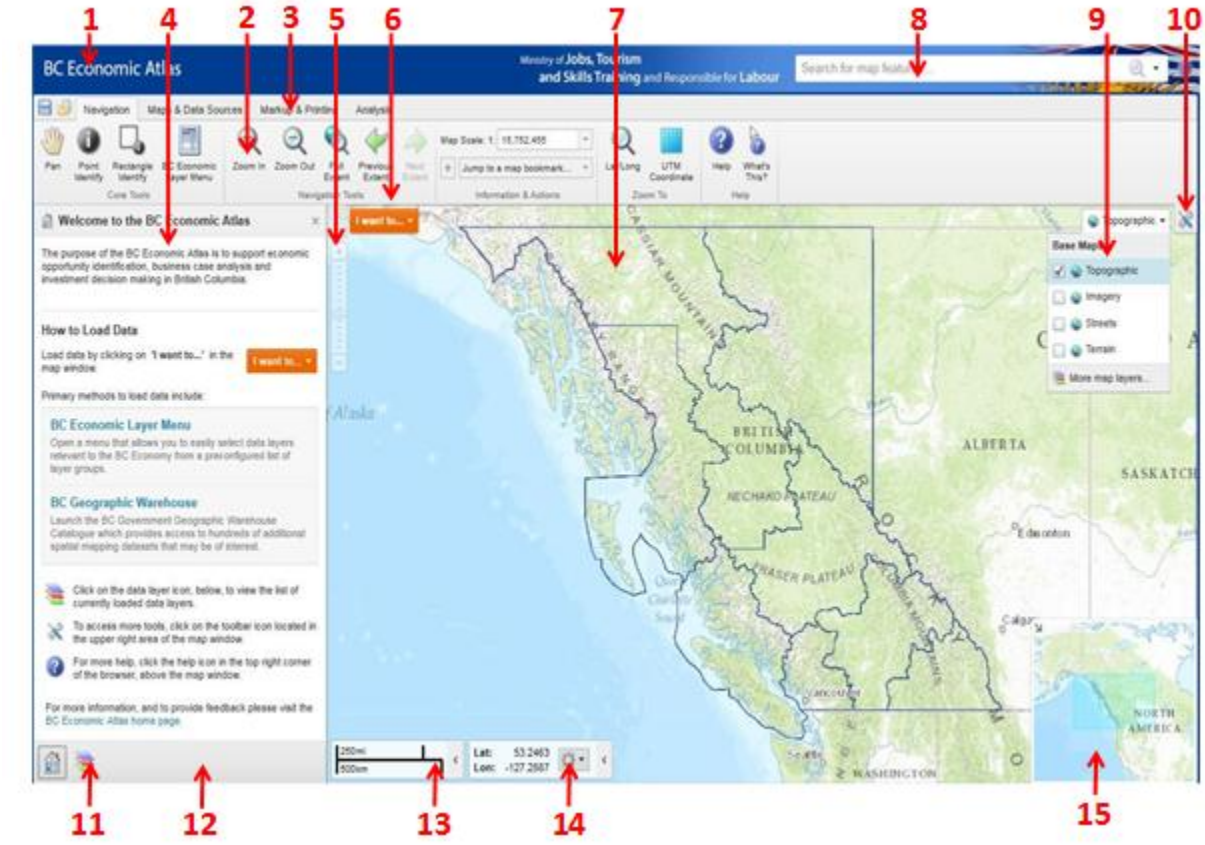
- Access spatial information from multiple sources;
- Identify, visualize and promote business opportunities;
- Conduct project scoping and business case analyses;
- Facilitate informed business and investment decision conversations.

This **User Guide** is meant to provide users with a basic understanding of BCEA including how get started with the **Map Viewer**, add data from multiple sources, identify data features, access toolbars, and print and share map sessions (see Section 8 for a link to a more detailed online user guide).

2 GETTING STARTED WITH THE MAP VIEWER

Upon launch of BCEA, you will see the **Map Viewer** screen. In this example, many of the navigation elements (e.g., information panel, base map menu, and overview map are visible so that they can be described. Many of these elements are hidden at start-up but are easily displayed as required.

Figure 1. BCEA Map Viewer Screen Navigation Elements and Features



Number	Screen Element
1	**Viewer Title Bar**: Displays the title of the application.
2	**Toolbar**: The toolbar contains numerous tools that are grouped into tabs by function.
3	**Toolbar Tabs**: The toolbar consists of tabs that categorize the tools into high-level groups: *Navigation, Maps & Data Sources, Markup & Printing, Analysis*
4	**Information Panel**: This panel lists different kinds of information as you interact with the map. For example, it displays Map Layers where you can select different layers to hide or show on the map or it displays a list of map features in the Results List when you perform a search or use the Identify tool. The filter and icons at the bottom of the panel allow you to control what information to display in the panel.
5	**Zoom Slider**: Use this slider to zoom in or out on the map by clicking the **+** or **-** or by dragging the marker up and down.
6	**I want to… Menu:** A menu of shortcuts to add data, show layers or to access the Welcome Panel
7	**Map**: The map window is where you interact with the map by zooming, panning, annotating, or right-clicking to get more information.
8	**Search Box:** You can type in the name of a feature to search for it on the map. It is also possible to search published map services (e.g., DataBC published ArcGIS/WMS services - see table 2 below for description).
9	**Base Map and Map Theme Menu**: This menu lists the Base Maps. The menu allows you to select different combinations of Base Maps as required.
10	**Toolbar Icon**: Shows or hides the toolbar when clicked.

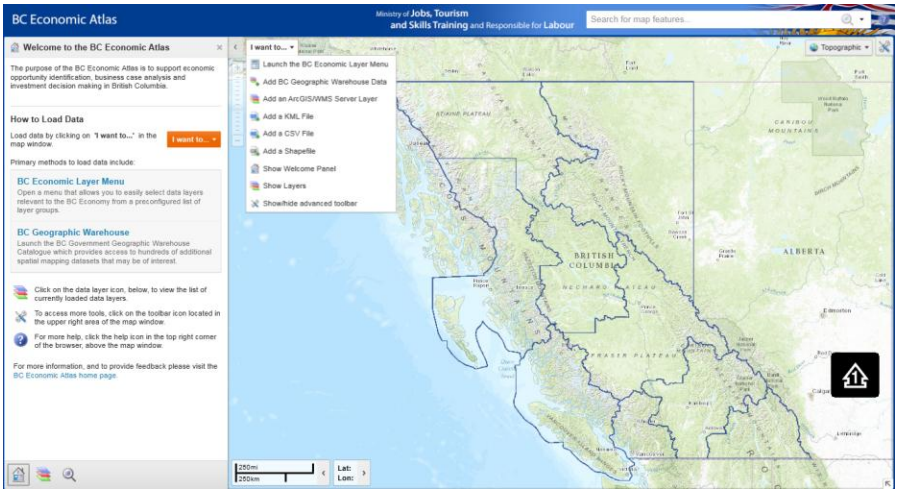
11	**Show Layers Tab:** Click here to show list of data layers currently open/available in map.
12	**Information Panel Toolbar**: Contains icons and a filter that you can use to control the information listed in the Information Panel. Clicking different icons changes the information to Map Layers, Results and any other options configured for the map. The Information Panel opens when you click the Show Layers button or when you run a search. To open it manually, click the arrow to the left of the I Want To menu. The **Show Layers/Show Legend** button allows you to toggle between the map legend and the map layers in the panel. The legend only displays symbols for the layers that are active on the map. The legend items change with the scale of the map.
13	**Scale**: The current scale of the map.
14	**Mouse Position**: The position (coordinates) of the computer cursor on the current map. To hide the mouse position, click the small arrow on the right.
15	**Overview Map**: Displays a thumbnail of the whole map with the current view shown as a small square on the map. The Overview map is an orientation tool to identify which part of the overall map you are currently zoomed in to. To hide the Overview map, click the arrow in the top left corner.

3 ADDING DATA TO THE MAP VIEWER

3.1 Options for Loading Data

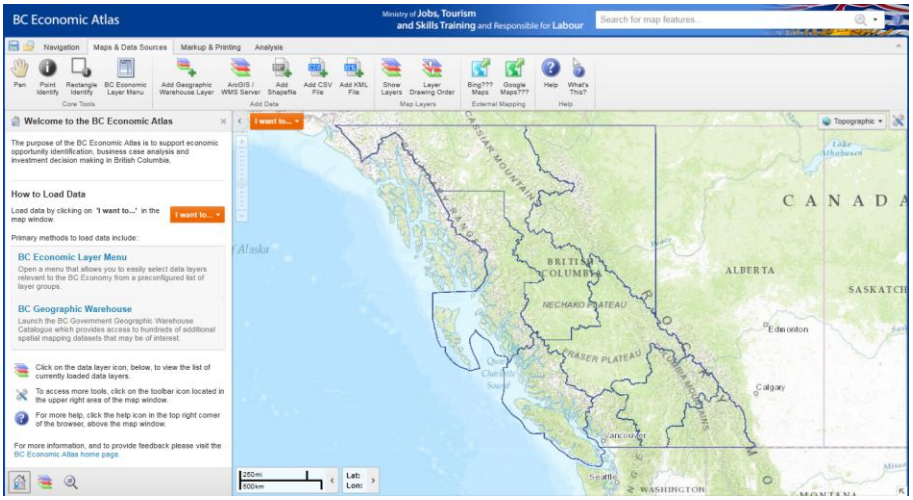
Once you are familiar with the **Map Viewer**, the next step is to add data. BCEA is a web mapping tool that is able to display information from a range of sources. First, access a menu for loading data, either by:

1) Clicking on the "**I want to…**" drop-down menu (#6 in Figure 1):


BC Economic Atlas
Ministry of Jobs, Tourism and Skills Training and Responsible for Labour
Search for map features...
Welcome to the BC Economic Atlas
The purpose of the BC Economic Atlas is to support economic opportunity identification, business case analysis and investment decision making in British Columbia.
How to Load Data
Load data by clicking on 'I want to...' in the map window.
I want to...
Primary methods to load data include:
BC Economic Layer Menu
Open a menu that allows you to easily select data layers relevant to the BC Economy from a preconfigured list of layer groups.
BC Geographic Warehouse
Launch the BC Government Geographic Warehouse Catalogue which provides access to hundreds of additional spatial mapping datasets that may be of interest.
Click on the data layer icon, below, to view the list of currently loaded data layers.
To access more tools, click on the toolbar icon located in the upper right area of the map window.
For more help, click the help icon in the top right corner of the browser, above the map window.
For more information, and to provide feedback please visit the BC Economic Atlas home page.
Launch the BC Economic Layer Menu
Add BC Geographic Warehouse Data
Add an ArcGIS/WMS Server Layer
Add a KML File
Add a CSV File
Add a Shapefile
Show Welcome Panel
Show Layers
Show/hide advanced toolbar
Topographic
BRITISH COLUMBIA
ALBERTA
NECHAKO PLATEAU
FRASER PLATEAU
Edmonton
Calgary
Lat:
Lon:

Or;

2) Opening the "**Maps and Data Sources**" Toolbar by first clicking on the **Toolbar Icon** (#11 in Figure 1), and then selecting "**Maps and Data Sources**" Toolbar Tab.



There are six options available for loading data within the **BC Economic Atlas:**

Data Option	Description	Source of Data
BC Economic Layer Menu	Customized data menu that allows users to select data relevant to the BC economy and investment individually and/or by theme group	Majority of data sourced from BC Geographic Warehouse
BC Geographic Warehouse Catalogue	The BC Geographic Warehouse Catalogue provides access to public spatial data that is managed and maintained primarily by the BC government	Encompasses data from a wide range of government agencies. Individual datasets are managed and maintained by various data custodians across agencies
ArcGIS/WMS Server	Web Map Service (WMS) is an international specification for serving and consuming dynamic maps on the web through published map services. WMS is useful for making maps available online in an open, recognized way across different platforms	DataBC ArcGIS/WMS Server published services, other published WMS open data sources
KML File	Keyhole Markup Language (KML) files specify a set of features (place marks, images, polygons, textual descriptions, etc.) for display in any geospatial software implementing KML encoding, such as the BC Economic Atlas or Google Earth	Open data or personal/proprietary data sources
CSV File	Comma Separated Values (CSV) is a file format used to store data in a structured table of lists, similar to excel spreadsheets	Open data or personal/proprietary data sources
Shapefile	A shapefile is a digital vector storage format for storing geometric location and associated attribute information	Open data or personal/proprietary data sources

3.2 Loading and Deleting Data using the BC Economic Data Layer Menu

To load data using the **BC Economic Data Layer Menu**, first launch the menu, using either of the two **Add Data** options described in Section 4.1, and the following window will appear in the map browser, with the instructions to *Select a Layer Group to Begin*.

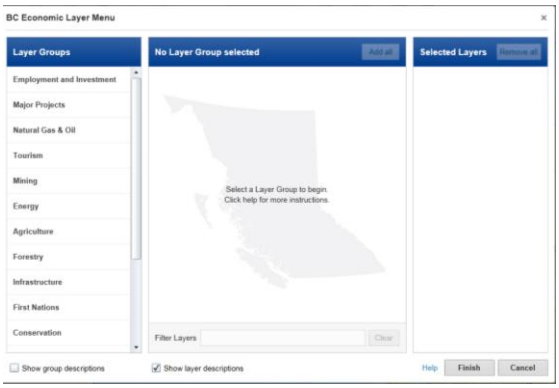
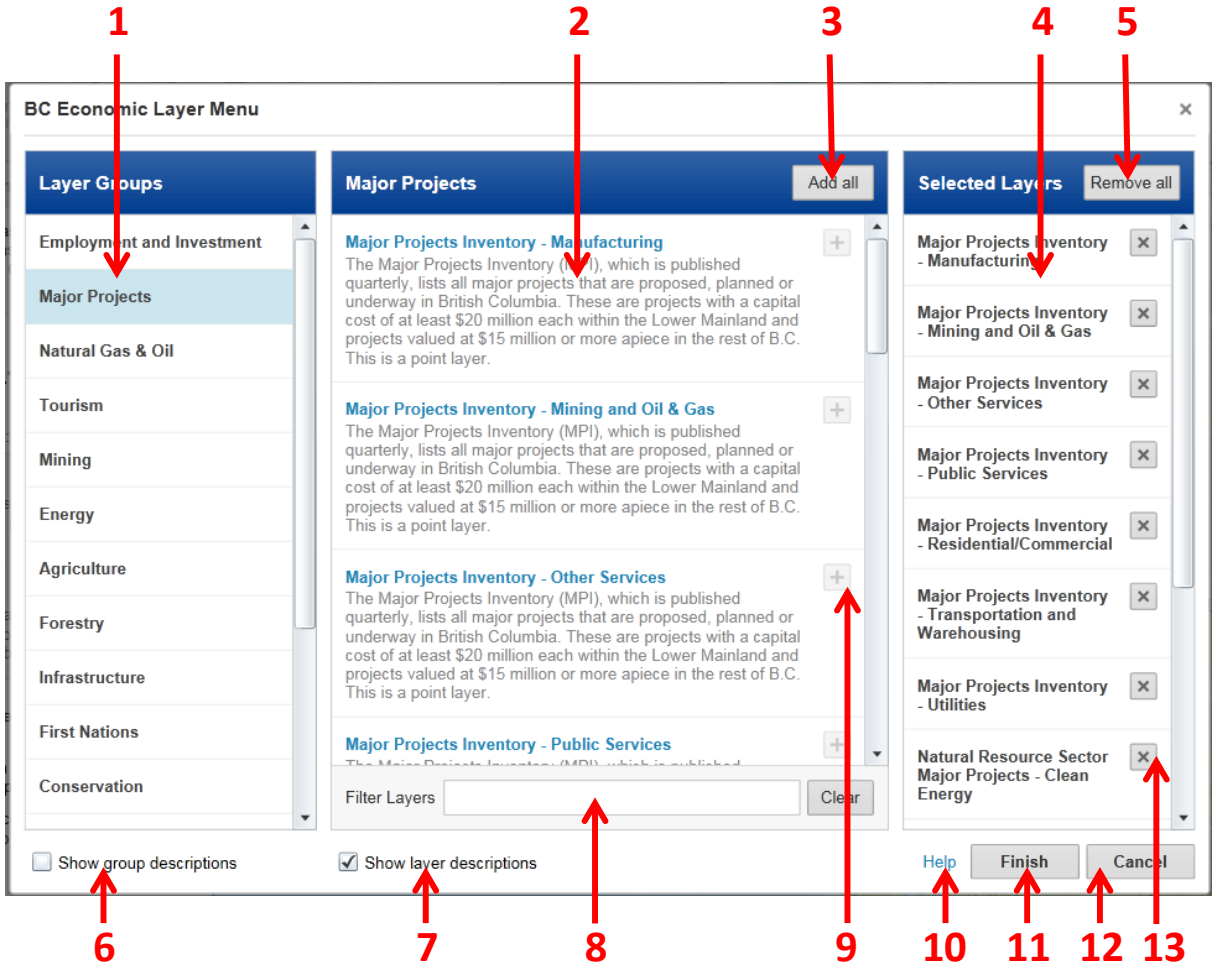


Figure 2 describes the various elements and features within the BC Economic Data Layer Menu. In this example, a layer group has been selected and numerous data layers appear in the middle column, while data selected for loading in the map viewer appears in the right hand column.

Figure 2. BC Economic Data Layer Menu Elements and Features


1
2
3
4
5
BC Economic Layer Menu
Layer Groups
Major Projects
Add all
Selected Layers
Remove all
Employment and Investment
Major Projects
Natural Gas & Oil
Tourism
Mining
Energy
Agriculture
Forestry
Infrastructure
First Nations
Conservation
Major Projects Inventory - Manufacturing
The Major Projects Inventory (MPI), which is published quarterly, lists all major projects that are proposed, planned or underway in British Columbia. These are projects with a capital cost of at least $20 million each within the Lower Mainland and projects valued at $15 million or more apiece in the rest of B.C. This is a point layer.
Major Projects Inventory - Mining and Oil & Gas
The Major Projects Inventory (MPI), which is published quarterly, lists all major projects that are proposed, planned or underway in British Columbia. These are projects with a capital cost of at least $20 million each within the Lower Mainland and projects valued at $15 million or more apiece in the rest of B.C. This is a point layer.
Major Projects Inventory - Other Services
The Major Projects Inventory (MPI), which is published quarterly, lists all major projects that are proposed, planned or underway in British Columbia. These are projects with a capital cost of at least $20 million each within the Lower Mainland and projects valued at $15 million or more apiece in the rest of B.C. This is a point layer.
Major Projects Inventory - Public Services
Filter Layers
Clear
Major Projects Inventory - Manufacturing
Major Projects Inventory - Mining and Oil & Gas
Major Projects Inventory - Other Services
Major Projects Inventory - Public Services
Major Projects Inventory - Residential/Commercial
Major Projects Inventory - Transportation and Warehousing
Major Projects Inventory - Utilities
Natural Resource Sector Major Projects - Clean Energy
Show group descriptions
Show layer descriptions
Help
Finish
Cancel
6
7
8
9
10
11
12
13

#	Screen Element
1	**Layer Group List**: Displays list of available layer group themes for selection
2	**Layer List:** Displays list of available layers for selection within the chosen layer group theme
3	**Add All Button:** Allows users to add all data layers from selected layer group for viewing on map
4	**Selected Layers List**: Displays list of data layers currently selected for viewing on map
5	**Remove All Button:** Allows users to remove all data layers currently selected for viewing on map
6	**Show Group Descriptions:** Allows users to toggle on/off brief descriptions of layer groups
7	**Show Layer Descriptions:** Allows users to toggle on/off brief descriptions of layers
8	**Filter Layers:** Allows users to filter layers in the selected layer group
9	**Add Layer:** Allows users to add individual layers for viewing on map
10	**Help:** Launches a brief tutorial that includes steps for adding/deleting and filtering data layers
11	**Finish Button:** Allows users to complete changes in BCEA menu and return to map viewer
12	**Cancel Button:** Allows users to cancel changes in BCEA menu and return to map viewer
13	**Remove Layer:** Allows users to remove individual layers currently selected for viewing on map

To add data layers:

1. Click on any layer group in left **Layer Groups** column to view available data layers within that group.
2. Select one or more data layers from middle column. Use **+** button to add individual data layers, or use **Add All** button to add all layers within selected layer group.
3. Selected data layers appear in the right **Selected Layers** column.
4. Add additional data layers of interest from other layer groups.
5. Press **Finish** button. Map loads with selected data layers.

To remove data layers:

1. To remove individual data layers, in the right **Selected Layers** column, click on the **X** button beside each data layer to be removed.
2. To remove all data layers, on the top of the right **Selected Layers** column, column, click on the **Remove All** button.
3. Press **Finish** button. Map reloads without data layers selected for removal.

To view descriptions of groups and individual layers:

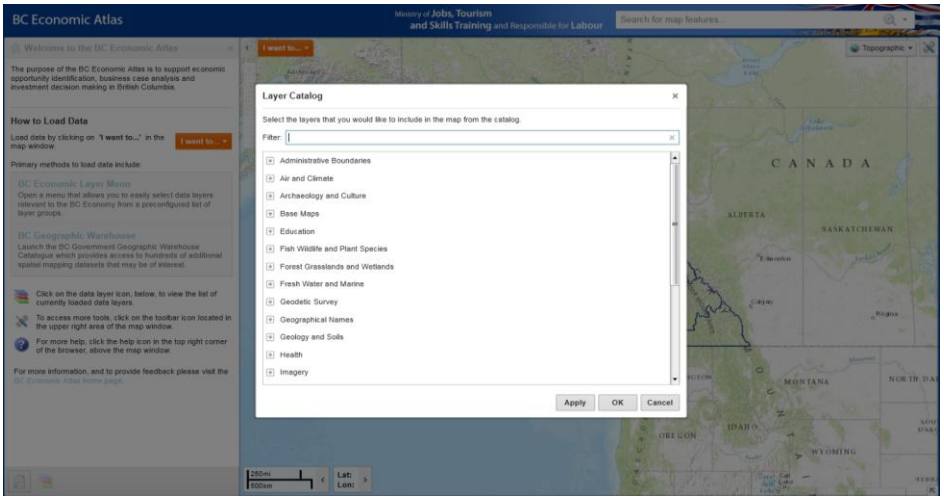
1. Toggle on/off **Show Description** checkboxes at bottom of left and middle columns.

To filter/search individual layers:

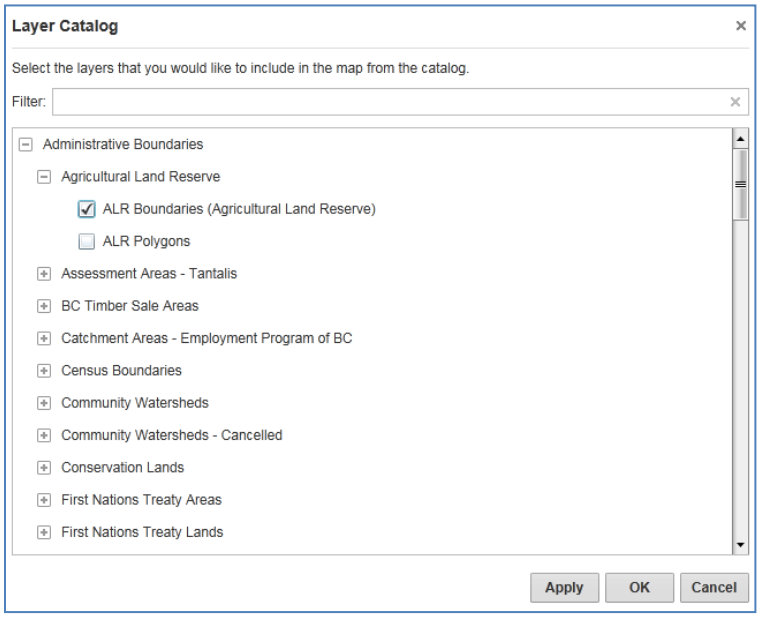
1. Click on any layer group in left **Layer Groups** column to enable the layer filter text box.
2. To filter on all available layers, select the **All Layers** group.
3. To clear the filter, click the **Clear** button.

3.3 Loading Data Using the BC Geographic Warehouse Catalogue

The BC Economic Data Layer Menu houses a subset of data most relevant to the BC economy. However, there is a wide range of other data held by the Province that may be of specific use to some BCEA users. To access this data using the **BC Geographic Warehouse Catalogue**, first launch the Catalogue, using either of the two **Add Data** options described in Section 4.1, and the following window will appear:



Once the **Catalogue** is open, users can scroll through the various folders to select data sets they are interested in, by clicking on the check box beside the data layer(s) of interest (e.g., selection of ALR boundaries below):

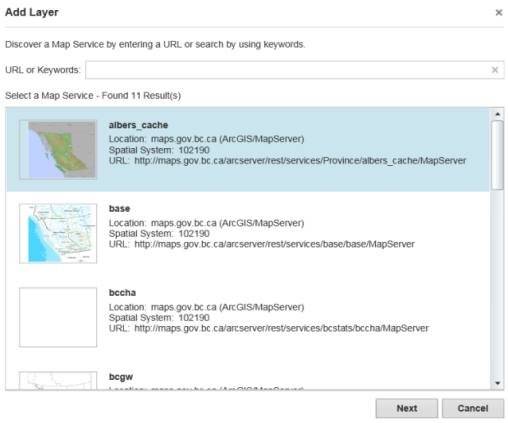


Once data of interest has been selected, click ***Apply*** in the lower right hand corner of the catalogue window. Click ***OK*** to return to **Map Viewer** with newly selected data loaded. Click ***Cancel*** to return to **Map Viewer** with no changes applied.

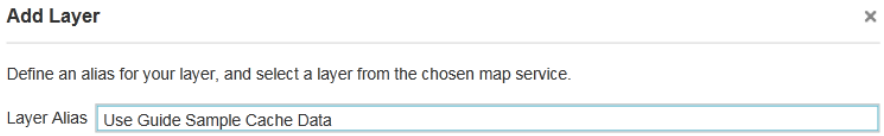
Note: *Data available in the BC Geographic Warehouse Catalogue may also be available through the BCEA Economic Layer Menu. When Warehouse data is already loaded in the BCEA Map Viewer, either via the BCEA Economic Layer Menu or the BC Geographic Warehouse Catalogue, the check box for that data set will be toggled on and the data set cannot be loaded a second time.*

3.4 Loading ArcGIS/WMS Map Service Data

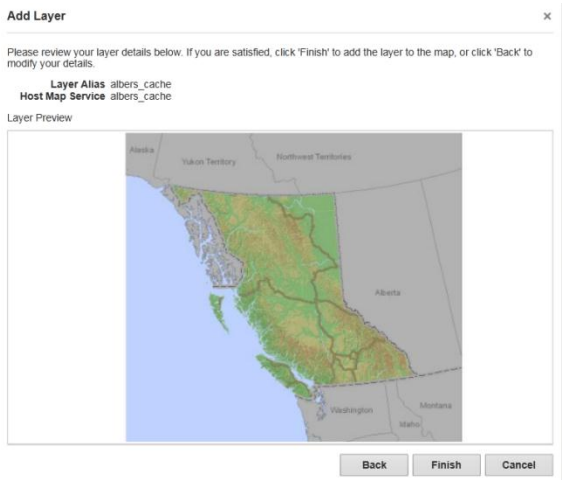
To add ArcGIS/WMS Service data, choose this option using either of the two **Add Data** options described in Section 4.1, and the following window will appear in the **Map Viewer** window:



To add data, either select one of the available Map Service layers in the list, or enter the specific URL of a known map service. Click ***Next***, and then add an alias name in the **Layer Alias** box:

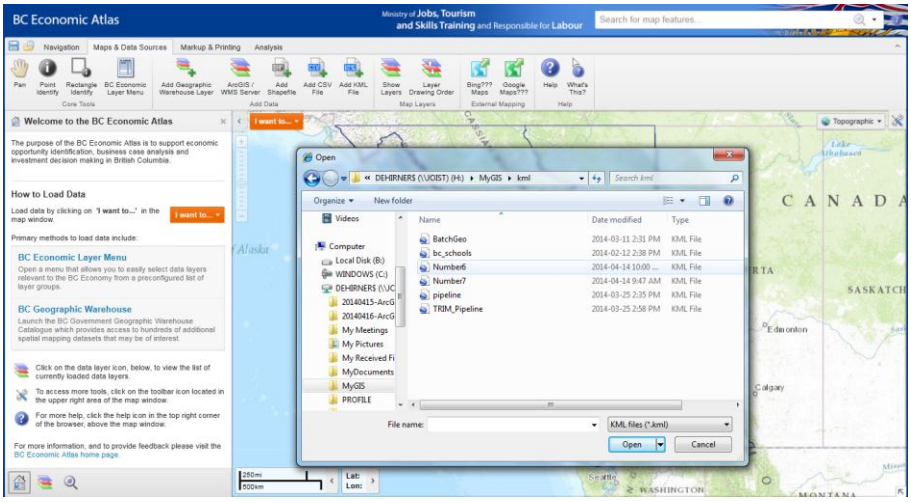

Add Layer
Define an alias for your layer, and select a layer from the chosen map service.
Layer Alias
Use Guide Sample Cache Data

Click ***Next*** again, and then click ***Finish*** to return the application to the **Map Viewer** with the map service data now loaded.



3.5 Loading KML, CSV and Shapefile Data

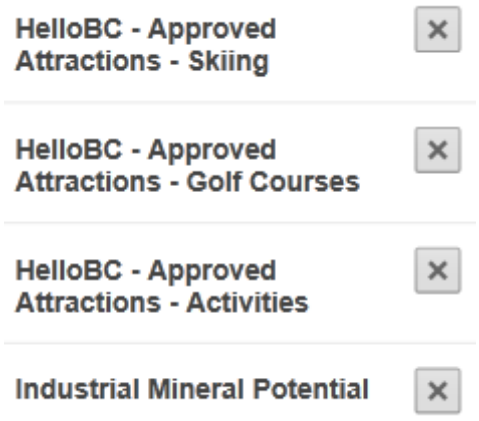
BCEA allows end users to add their own personal or open source KML, CSV and/or shapefile data. To do this, select one of the add KML, CSV or shapefile options using either of the two **Add Data** options described in Section 4.1. When any of these options are selected, a file folder window pops up, prompting the user to navigate to the location where the CSV, KML, or shapefiles are stored. Once the files are located, select the file(s), click ***Open***, and the pop window will close, returning to the **Map Viewer** with the new data loaded.



3.6 Deleting Data

Regardless of source or data type, all data added to the **Map Viewer** is deleted using the **BCEA Economic Data Layer Menu** window. When the layer menu is open, users can either:

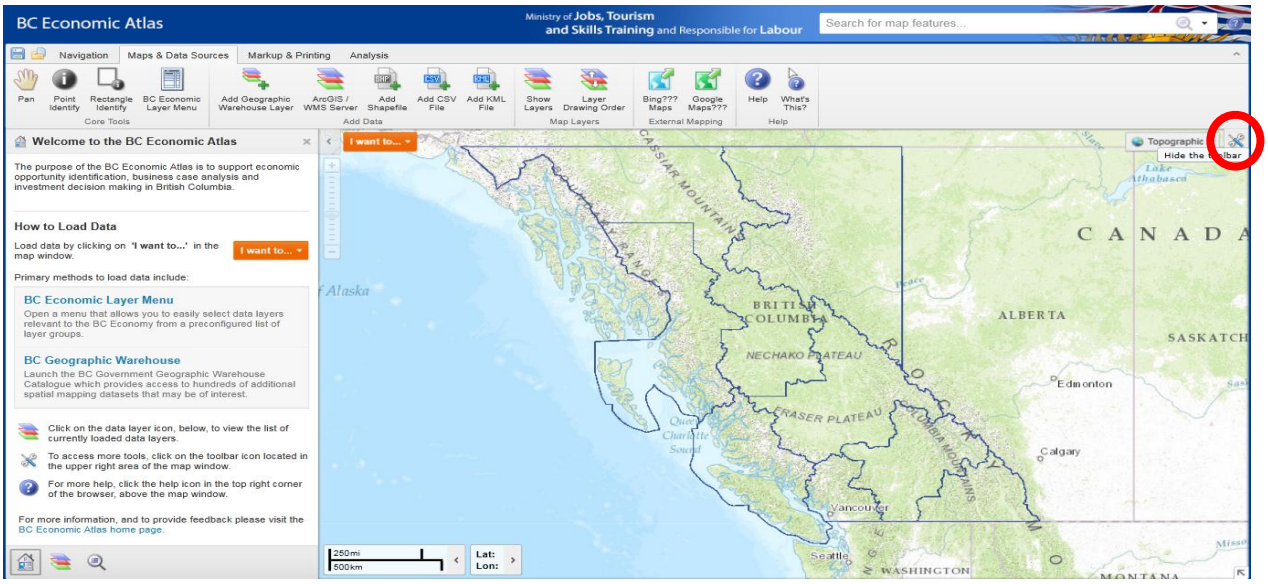
Remove all data using the **Remove All** icon in the upper right corner (#5 in Figure 2); or, remove individual layers by clicking on the **X** symbol for that layer in the right hand column of the layer menu (#13 in Figure 2).


HelloBC - Approved Attractions - Skiing
HelloBC - Approved Attractions - Golf Courses
HelloBC - Approved Attractions - Activities
Industrial Mineral Potential

Once data layers have been removed, using either method, click **Finish** to return to the **Map Viewer**.

4 ACCESSING AND UNDERSTANDING THE TOOLBARS

Once you are familiar with the functions within the **Map Viewer** and are comfortable with how to load and delete data, the next step is to begin understanding the variety of tools available within BCEA. First, to open the toolbar, click on the **Toolbar Icon** in the upper right corner of the map screen and the toolbar will open in the Map Viewer.


BC Economic Atlas
Ministry of Jobs, Tourism and Skills Training and Responsible for Labour
Search for map features...
Navigation
Maps & Data Sources
Markup & Printing
Analysis
Pan
Point Identify
Rectangle Identify
BC Economic Layer Menu
Add Geographic Warehouse Layer
ArcGIS / WMS Server
Add Shapefile
Add CSV File
Add KML File
Show Layers
Layer Drawing Order
Bing??? Maps
Google Maps???
Help
What's This?
Core Tools
Add Data
Map Layers
External Mapping
Help
Welcome to the BC Economic Atlas
The purpose of the BC Economic Atlas is to support economic opportunity identification, business case analysis and investment decision making in British Columbia.
How to Load Data
Load data by clicking on 'I want to...' in the map window.
I want to...
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BC Geographic Warehouse
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For more help, click the help icon in the top right corner of the browser, above the map window.
For more information, and to provide feedback please visit the BC Economic Atlas home page.
I want to...
Topographic
Hide the toolbar
CANADA
BRITISH COLUMBIA
ALBERTA
NECHAKO PLATEAU
FRASER PLATEAU
Edmonton
Calgary
Vancouver
Seattle
WASHINGTON
250mi
500km
Lat:
Lon:

The toolbar contains numerous tools that are grouped into four tabs by function. Four of the most often used icons (i.e., Pan, Point Identify, Rectangle Identify, Launch BC Economic Data Layer Menu) are present on the left side of each toolbar tab so they are readily available any time the toolbar is open during a map session. The two help icons are also present on each toolbar tab.

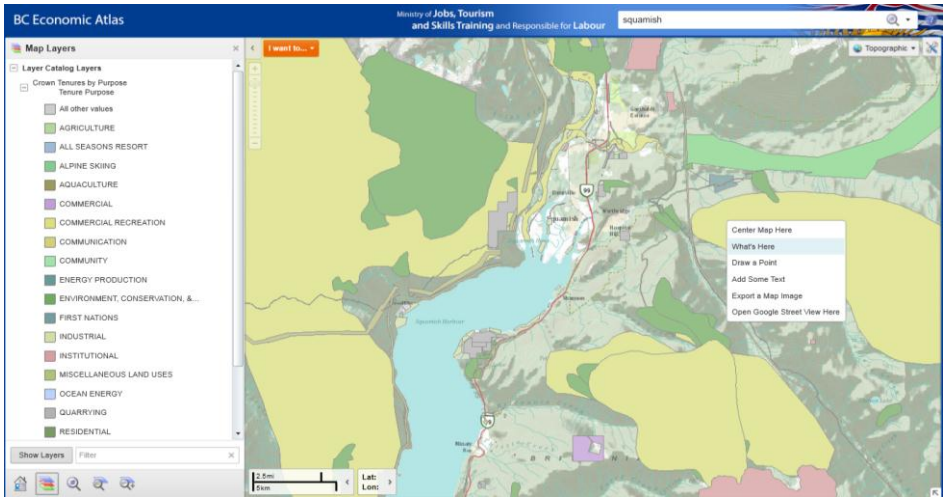
Toolbar Tab	Toolbar Description and Functions
Navigation	The **Navigation** toolbar has tool icons for navigating within the map screen including zooming in and out of the map at different scales, zooming to a specific map scale, setting spatial bookmarks, and zooming to specific lat/long or UTM coordinates
Maps & Data Sources	The **Maps & Data Sources** toolbar has tool icons for adding different data types to the Map Viewer (see Section 4.1), reordering map layers in the map screen, and launching Google and Bing external maps
Markup & Printing	The **Markup & Printing** toolbar has tool icons for printing and exporting maps (see Section 7), viewing selected data features, and markup tools such as inserting, editing and deleting various shapes, lines, points and text boxes
Analysis	The **Analysis** toolbar has toolbar icons for identifying features (see Section 6), querying and filtering data features, measuring distance and area, and plotting Lat/Long or other coordinates

This is only a cursory snapshot of the toolbar functions within the BCEA. More detailed information on how the tools work can be found online by clicking here.

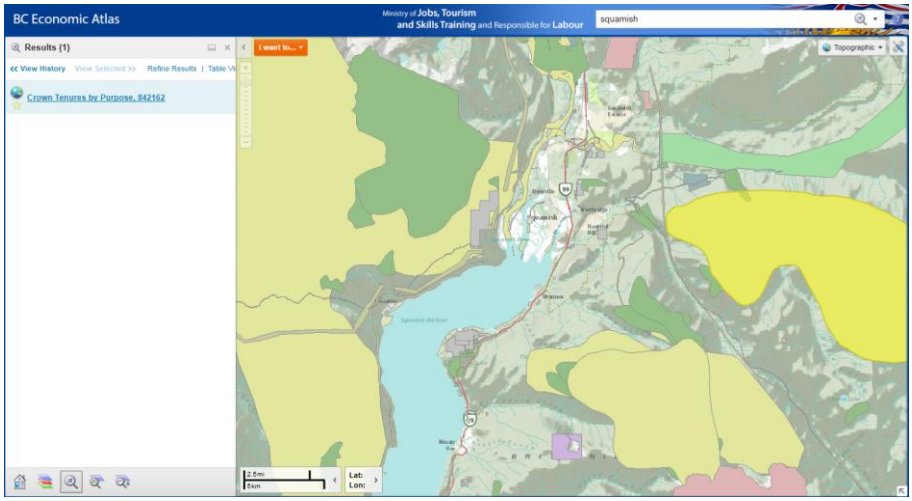
5 IDENTIFYING DATA FEATURES IN THE MAP VIEWER

An important feature of the BC Economic Atlas is the ability to identify what you seeing on the map, along with any associated information that may need to be considered. There are a number of ways to identify features within the **Map Viewer**.

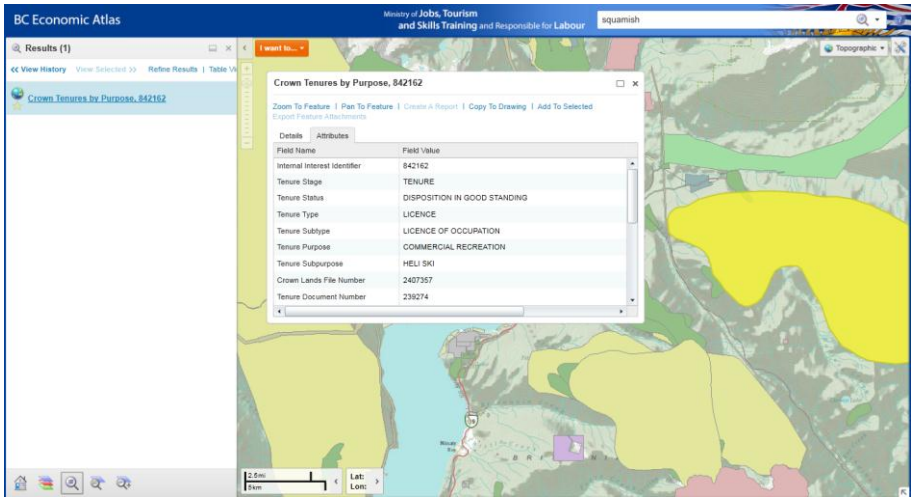
1) Right Click on map when hovering over a feature of interest and select **What's Here** (this method is most useful for identifying specific point features such as business opportunities).



Once selected, the features that have been identified will be captured and displayed as ***Results*** in the **Information Panel**.



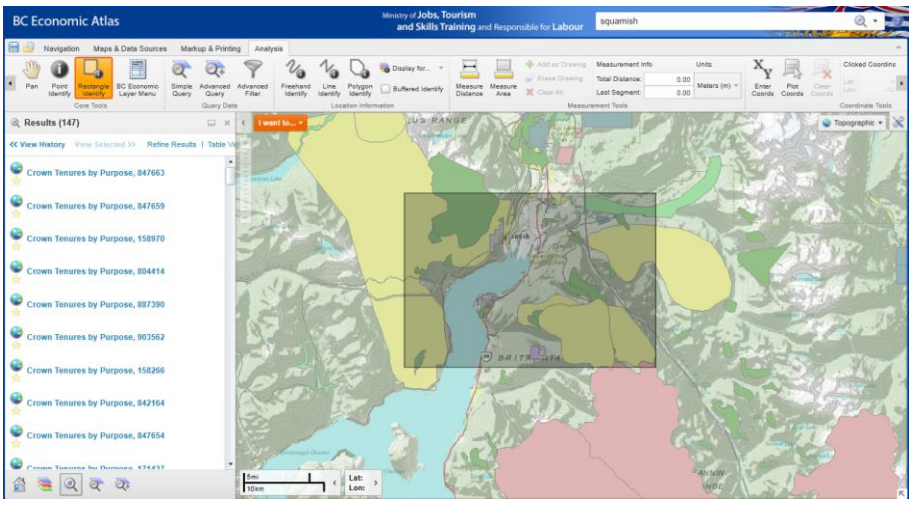
And a left click on any of the captured features in the **Information Panel** will open up the ***Data Attribute Table*** where more detailed information on the selected feature is available.



2) Open the "**Analysis"** Toolbar Tab (see section 5 above) and select one of the 5 options for identifying features:

Point identify functions the same as the **What's Here** option above.

The other four **Identify** options - ***Rectangle, Freehand, Line*** and ***Polygon*** – allow the user to do either an area or linear based search of features of interest. The following example shows the ***Rectangle Identify*** tool being used to identify tenure information in and around Squamish.

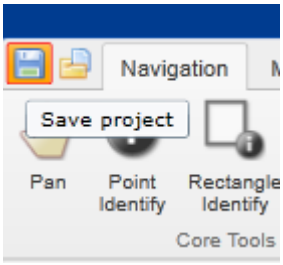

BC Economic Atlas
squamish
Results (147)
Crown Tenures by Purpose, 847663
Crown Tenures by Purpose, 847659
Crown Tenures by Purpose, 158970
Crown Tenures by Purpose, 804414
Crown Tenures by Purpose, 887390
Crown Tenures by Purpose, 903562
Crown Tenures by Purpose, 158266
Crown Tenures by Purpose, 842164
Crown Tenures by Purpose, 847654

Once the features are selected and displayed in the Information Panel, the same steps as above can be used to open up the ***Data Attribute Table*** where more detailed information on the selected feature is available.

6 SAVING, PRINTING AND SHARING OPTIONS

There are several tools built into the BCEA that enable the user to save, print and share map products and sessions. To access these tools, first launch the toolbar (see Section 5).

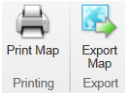
The **Save Project** and **Open Project** icons appear in the left corner of all the toolbars.



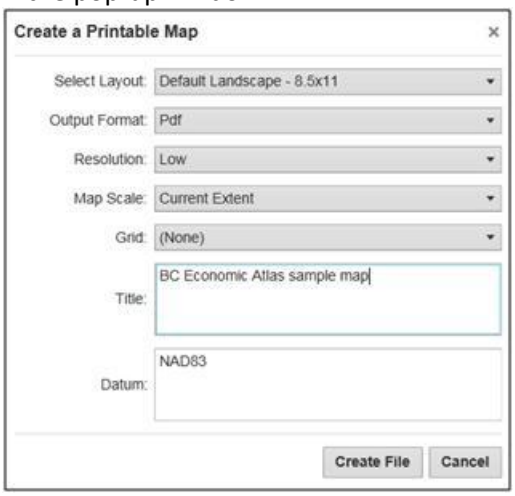
Save as Project File

To save a map session as a Project File, click **Save Project** , and then name and save the file in the appropriate hard drive or network folder. The file extension for all BCEA files is *.gvsp*. This saved project file (gvsp)can be emailed to colleagues to share a BCEA map session.

To open saved files, click on the **Open Project** icon and open the file from the folder where it was saved.

The **Print** and **Export Map** icons are located on the **Markup and Printing** toolbar. 

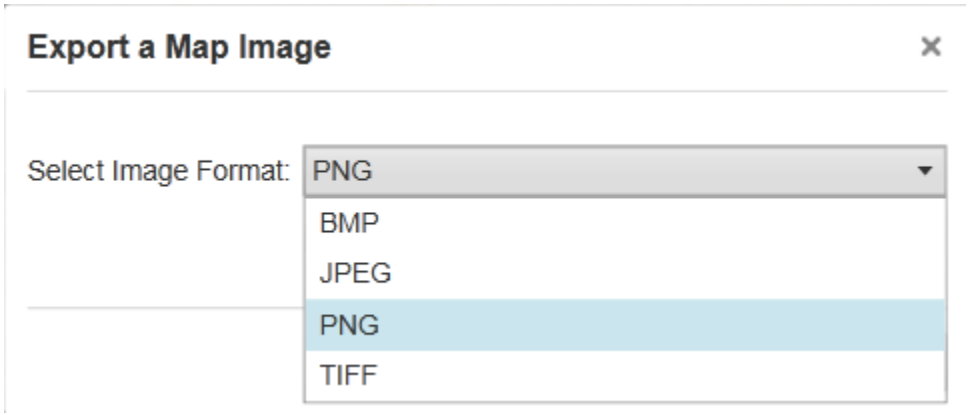
The **Print** tool enables a user to print an 8.5 x11 pdf of the current map extent, including all markup and edits. To create a printable map, click on the **Print Map** icon, and complete the information that appears in the pop-up window:



Click **Create File**, and in the next window click **Open File** to view the map.

The **Export Map** tool enables users to save the current map extent extent, including all markup and edits, in four different *"picture"* file types, including *BMP, JPEG, PNG and TIFF.*

To create a picture file, click on the **Export Map** icon, and then select the type of image you want to save:



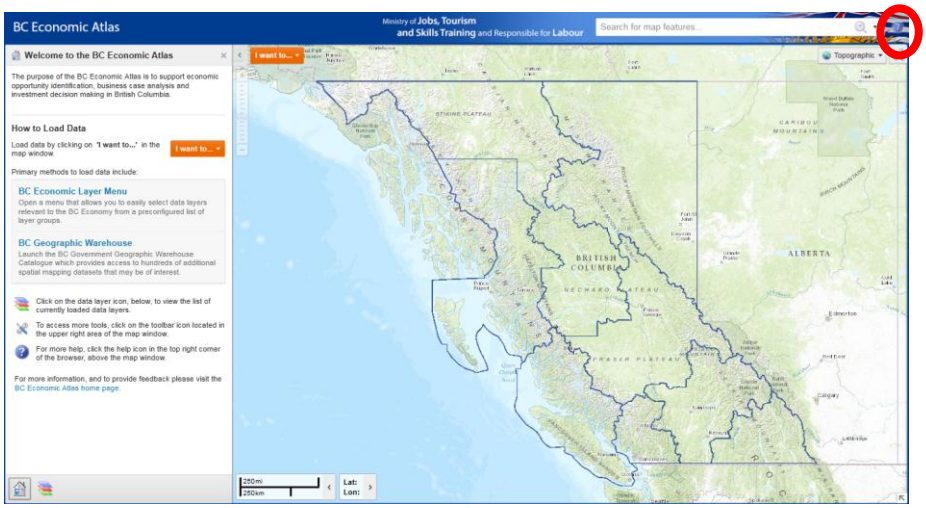
Once selected, click **Create Image**, and in the next window click **Open File** to view the picture file.

7 ADDITIONAL INFORMATION

Additional information on how to use the Geocortex Essentials mapping platform that BCEA is hosted on, including its numerous navigation, analysis, editing and sharing tools can be found in this detailed user manual provided by the software developer, Latitude Geographics.

http://maps.gov.bc.ca/ess/sv/bcea/Help/Default.htm

This more advanced user guide can also be accessed by clicking on the **Help Icon** in the top hand corner of the BCEA map viewer.



Questions or comments on this User Guide or anything BCEA related can be sent to: bcea@gov.bc.ca

Visit the BC Economic Atlas Website:

www.gov.bc.ca/economicatlas